

WHAT IS CLAIMED IS:

1. A method of use of a communication network, comprising by the steps of:

(a) selecting one route with an intercept from among a plurality of different available routes in accordance with criteria pertaining to the routes, each of the routes passing through a control location and between a calling party access number and a called party access number, the step of selecting being carried out in a manner transparent to users of the calling party access number and the called party access number;

(b) passing information between the intercept and the control location in a manner transparent to users of the calling party access number and the called party access number;

(c) evaluating said information in a manner transparent to users of the calling party access number and the called party access number so as to determine whether to bridge calls between the calling party access number and the called party access number through the selected route; and

(d) in response to step (c) determining that the calls between the calls are to be bridged through the selected route, instructing that the calls between the calling party access number and the called party access number be bridged through the selected one route.

2. A method as in claim 1, wherein step (b) includes receiving the information at the control location; further characterized by:

(e) receiving a status signal at said control location indicating if said called party access number is available for taking an incoming phone call;

(f) in response to said status signal, initiating a first phone call from said control location to said called party access number and a second phone call from said control location to said calling party access number; and

(g) bridging said first and second phone calls.

1 3. A method as in claim 2, further comprising the step of completing the first
2 phone call in response to receiving a further status signal indicating that the second phone call
3 has been completed.

1 4. A method as in claim 1, wherein step (c) includes evaluating whether said
2 called party access number is available for taking an incoming phone call.

1 5. A method as in claim 5, wherein the step of evaluating is at least partially
2 based on whether a reply has been received that is indicative of availability of the called party
3 access number before a time duration has elapsed.

1 6. A method as in claim 1, further comprising the steps of:

2 (e) determining an expected time to communicate with the called party
3 access number upon placing the first call thereto and determining the expected time to
4 communicate with the calling party access number upon placing the second call thereto:

5 (g) in response to completion of the step of determining, initially placing
6 whichever of the first and second calls has the longer of said expected time before
7 communication;

8 (h) waiting for a time period to elapse that lasts at most as long as said
9 difference in time between communication with the calling party access number and the
10 called party number; and

11 (i) thereafter placing whichever of the other of the first and second calls
12 has the shorter of said expected time before communication.

1 7. A method as in claim 6, further comprising the step of timing step (h) so that
2 step (i) is carried out such that calls to both the calling party access number and the called
3 party access number occur at the same time the calls are bridged.

1 8. A method as in claim 6, further comprising the step of blocking any incoming
2 calls for a duration that lasts up to said difference in time.

1 9. A method as in claim 6, wherein the step of waiting is carried out based on
2 checking with memory for information on the difference in time between communicating with
3 said calling party access number and said called party access number, further comprising the
4 step of sensing times when calls to said called party access number and to said calling party
5 access number actually went through and updating said information in the memory based on
6 results from the sensing.

1 10. A method as in claim 1, further comprising the steps of:
2 determining which service providers service connections between said calling
3 party access number and said called party access number;
4 comparing said service providers based on criteria;
5 selecting appropriate ones of said service providers that satisfy said criteria as a
6 result of the step of comparing; and
7 instructing said selected service providers to provide service between said
8 connections for establishing contact between said calling party access number and said called
9 party number in response to the step of ascertaining that said called party access number is
10 available and to the step of selecting making selection of the appropriate ones of the service
11 providers.

1 11. A method as in claim 10, wherein said criteria includes any one of
2 transmission quality, levels of security of transmission, cost for service by said service
3 providers including peak and off-peak rates, types of communication routes available between
4 said calling party access number and said called party, and historical record of quality of
5 service provided by said service providers.

1 12. A method as in claim 10, wherein the steps of determining, comparing,
2 selecting and instructing are carried out transparent to the calling party whose calling party
3 access number was received.

1 13. A method as in claim 10, wherein one of said connections is associated more
2 with said called party access number than with said calling party access number, said one
3 connection being serviced by a plurality of service providers and different types of equipment
4 that provide communication access.

1 14. An apparatus for use in a communication network, comprising an intercept that
2 selects one route from among a plurality of different available routes in accordance with
3 criteria pertaining to the routes, each of the routes passing through a control location and
4 between a calling party access number and a called party access number, the intercept
5 selecting the one route in a manner transparent to users of the calling party access number
6 and the called party access number, the intercept further passing information with the control
7 location in a manner transparent to users of the calling party access number and the called
8 party access number, the intercept evaluating the information passed from the control location
9 in a manner transparent to users of the calling party access number and the called party
10 access number to ascertain whether to bridge calls through the selected one route between the
11 calling party access number and the called party access number and, if so, instructing that
12 calls between the calling party access number and the called party access number be bridged
13 through the selected one route.

1 15. An apparatus as in claim 14, further comprising a device that transmits the
2 information from the intercept to the control location over a channel.

1 16. An apparatus as in claim 14, wherein said intercept receives a status signal as
2 the information that passes from the control location and that is indicative of an availability of
3 the called party access number to take an incoming call.

1 17. An apparatus as in claim 14, wherein the intercept determines whether the
2 called location is available only if a reply that is indicative of availability of the called party
3 access number is received before a time duration has elapsed.

1 18. An apparatus as in claim 14, wherein said intercept determines which service
2 providers service connections between said calling party access number and said called party
3 access number and compares said service providers based on criteria to select appropriate
4 ones of said service providers that satisfy said criteria and to instruct said appropriate ones of
5 selected service providers to provide instructions to effect said connections for establishing
6 communication between said calling party access number and said called party number.

1 19. An apparatus for use of a communication network, comprising:

2 (a) a control location receiving a calling party access number and a called
3 party access number;

4 (b) a callback device at the control location that initially places a first call
5 to whichever of the calling party access number and the called party access number has the
6 longer of said expected time before communication in response to said information retrieval
7 device determining which times are longer,

8 (c) a timing circuit that counts time up to said difference in time between
9 getting through to the calling party access number and getting through to the called party
10 access number, said callback device being responsive to said timing circuit completing the
11 count to thereafter place a second call to whichever of the calling party access number and
12 the called party access number has the shorter of said expected time before getting through;
13 and

14 (d) a bridging device that bridges the first and second calls.

1 20. An apparatus as in claim 19, wherein said timing circuit counts for a duration
2 long enough so that said callback device places said second call so that both the calling party
3 access number and the called party access number are reached simultaneously.

1 21. An apparatus as in claim 19, further comprising a component that blocks any
2 incoming calls for a duration that lasts up to said difference in time.

1 22. An apparatus as in claim 19, further comprising an information retrieval device
2 that checks memory containing information pertaining to the time before getting through to
3 the calling party access number upon placing a call thereto and the time before getting
4 through to the called party access number upon placing a call thereto, said information
5 retrieval device further determining which of the times as retrieved is longer, said timing
6 circuit being responsive to said information retrieval device for counting time until a period
7 elapses that is at most the same as said difference in time between getting through to said
8 calling party access number and said called party access number; a sensing device that senses
9 times when calls to said called party access number and to said calling party access number
10 actually went through; and a device that updates said information in the memory based on
11 results from the sensing device.

1 23. A method of use of a communication network, comprising the steps of:
2 (a) receiving a calling party access number and a called party access
3 number;
4 (b) in response to step (a), checking a status on each of plurality of
5 communication access locations each associated with said called party access number to
6 determine which is accessible to reach said called party access number; and
7 (c) based on the result of step (b), identifying the communication access
8 location that was determined as being accessible and making an indication that
9 communication may become established with the called party access number, steps (a) to (c)
10 being carried out in a manner that is transparent to users of the calling party access number
11 and the called party access number.

1 24. A method as in claim 23, wherein each of said access locations connect with
2 respective forms of communication networks that are otherwise incompatible with each other.

1 25. A method as in claim 23, wherein said communication access locations are
2 each in connection with a different form of communication networks, further comprising the
3 steps of:

4 checking for authorization to allow communications through at least an
5 authorized one of said access locations;
6 routing in response to said authorization being present said communications
7 through at least said authorized one of said access locations; and
8 converting in response to the indication to make a conversion of said
9 communications through at least said authorized one of said communication access locations
10 from one form into another, said communication networks being incompatible with each other
11 in an absence of said conversion.

1 26. A method as in claim 23, wherein said converting includes any one of
2 compressing and sampling.

1 27. An method as in claim 23, further comprising selectively encoding and
2 decoding said communication as appropriate after step (c).

1 28. A method as in claim 23, further comprising the steps of:

2 (d) commencing transmission of communications through a route to the
3 identified one of said communication access locations based on the indication;

4 (e) ascertaining a quality of the transmission over the route as said
5 communications traverse said route; and

6 (f) before completing the transmission commenced in step (d), changing the
7 route over which the communications are transmitted in response to step (e) upon ascertaining
8 that said quality degraded below a level of acceptability.

1 29. An apparatus for use of a communication network, comprising:

2 a receiver of a called party access number;

3 a checking device responsive to the receiver to check a status on each of
4 plurality of communication access locations each associated with said called party access
5 number to determine which is suitable for reaching said called party access number; and

6 an identifying device responsive to the checking device to identify the
7 communication access location that was determined as being accessible and making an
8 indication that communication may become established.

1 30. An apparatus as in claim 29 further comprising:

2 a commencing device responsive to said identifying device identifying said
3 communication access location accessible for commencing transmission of communications
4 over a route to said identified communication access location;

5 a quality checking device that ascertains a quality of the transmission over the
6 route as said communications traverse said route; and

7 a route changer that changes the route over which the communications are
8 transmitted in response to said quality checking device finding said quality degraded below a
9 level of acceptability.

1 31. An apparatus as in claim 29, wherein said communication access locations are
2 each in connection with a different form of communication network, further comprising:

3 an authorizer checking for authorization to allow communications through at
4 least one of said access locations;

5 a router responsive to said authorization being present to route said
6 communications through at least an authorized one of said access locations; and

7 a converter responsive to said indication for making a conversion of said
8 communications through at least said authorized one of said communication access locations
9 from one form into another, said communication networks being incompatible with each other
10 in an absence of said conversion.

1 32. An apparatus as in claim 31, wherein said converter includes any one of
2 compression circuitry and sampling circuitry.

1 33. An apparatus as in claim 31, wherein said checking device is part of a
2 processor, further comprising encoding and decoding circuitry, said processor accessing said
3 encoding and decoding circuitry to selectively code and decode said communication as
4 appropriate.

1 34. An apparatus for use in a communication network, comprising:
2 a central switching unit passing information with an intercept in a manner
3 transparent to users of a calling party access number and a called party access number, said
4 central switching unit being responsive to the information received from the intercept to check
5 on an availability of the called party access number to receive an incoming call from the
6 central switching unit to bridge with a call to the calling party access number, said central
7 switching unit bridging calls to the calling party access number and the called party access
8 number in response to finding that the called party access number is available.

1 35. An apparatus as in claim 34, wherein the central switching unit places a call to
2 the called party access number and monitors for an answer.

1 36. An apparatus as in claim 34, wherein said central switching unit sends
2 information to the intercept indicative of any one of availability of the called party access
3 number to receive an incoming phone call and answering of a call placed to the called party
4 access number.

1 37. An apparatus as in claim 34, wherein said central switching unit decides
2 whether to accept an incoming call and, only if so, bridges the calls.